definite focal symptom of a callosal tumor, which can be explained by the direct effect upon its fibers is the psychical state of stuporous dementia, due to the injured association function of the fibers of the corpus callosum. It is also probable that in addition to the psychical function of the corpus callosum, it has to do with the innervation of voluntary muscles and their co-ordination in homolateral movements of the body. This has been experimentally proven in animals by Mott. In this case there was an extreme disturbance of equilibrium together with ability to use a single extremity in isolated movements. This symptom has been observed before in tumors in this region. The co-ordination disturbance which affects chiefly those muscular actions which have to do with retention of equilibrium is a focal symptom of callosal tumors and the name callosal ataxia (*balken ataxie*), may be given to it. The poverty of movement in this case may be ascribed to the diminished physiological stimuli which normally pass through the fibers of the corpus callosum. In doubtful cases of tumors in this region this last symptom may be of diagnostic utility. SCHWAB.

OBSERVATIONS ON BRAIN SURGERY. Geo. W. Crile (Medical Record, February 17, 1900).

As a result of a large number of experimental researches on the brains of animals, the author says, that the immediate effect of increased intracranial pressure is not marked until the brain is compressed for from five to seven per cent. of its volume. Respiration is affected sooner and more profoundly than the blood pressure. Respiration is at first slowed, then arrested. The higher the blood pressure, the higher is the intracranial pressure necessary to cause respiratory paralysis, and when such arrest has occurred, if the blood pressure is increased respiration may be resumed. In the presence of respiratory arrest, if artificial respirations are produced blood pressure usually rises, and natural breathing may reappear.

Increased intracranial pressure causes slowing of the heart, followed by intermissions and later complete arrest. When pressure persists, the inhibitory mechanism fails, and very rapid heart action follows. The intracranial and the blood pressure vary inversely. With the brain under pressure, less anesthetic is required to cause surgical anesthesia, and the deeper the anesthesia the earlier and more abruptly respiration fails. When respiration or circulation or both are affected by conditions causing increased intracranial pressure, it is fair to assume that the brain has suffered compression equal to five per cent. of its volume, except in cases where their centers in the medulla are directly affected. A pulse frequently alternating between a very rapid and a very slow action, indicates an exhausted cardiac center, a fatal prognosis, and a very strong contraindication to operative procedure. At the same time the vasomotor system is exhausted. During operation an assistant should always be ready to do artificial respiration, and ice and hot water should be at hand for alternate application to chest and abdomen as respiratory stimulants. If respiration ceases and cannot be renewed, the skull should be opened as quickly as possible and the pressure relieved, when normal breathing will almost surely recur. The first effect of blows on the skull, gunshot wounds, rapidly increased intraventicular pressure, etc., is respiratory failure, while the heart continues beating for some minutes. Therefore artificial respiration is an important first-aid in brain injuries, and since increase of blood pressure favors the return of spontaneous breathing, proper stimulation should be given. There is a well defined area, external to the olfactory tract, and in front of the uncinate gyrus, stimulation of which causes arrest of breathing. This area rests directly against the base of the skull and is therefore liable to injury by either direct or indirect violence. In one case, dying of respiratory failure after a fall, autopsy revealed a marked laceration of this part of the brain.

JELLIFFE.

DE LA GENERALISATION DES CRISES EPILEPTIQUES CONSECUTIVES AUX TRAUMATISMES LOCALISES DU CRANE CHEZ L'ENFANT ET DE LEUR TRAITMENT. (Generalization of Epileptiform Crises Due to Localized Traumatisms on the Skull in Childhood.) Chipault (Travaux de Neurologie Chirurgicale, April-July, 1900).

Chipault states that while in the adult, injury to the cortex only causes Jacksonian epilepsy, as a rule, in the child we usually find that without the slightest predisposition, the most limited trauma may cause general convulsions. The author relates ten cases to demonstrate his thesis and several cases are here given as examples.

Case V.—H. F., aged four years; spasmodic hemiplegia with epileptiform crises. Cause probably an intra-uterine trauma, the mother having fallen when she was seven months pregnant. The labor itself was easy, and the child was normal at birth. When seven months old, the spastic paralytic condition was first noted, and at about the age of one year, slight epileptiform crises appeared, which soon degenerated into ordinary epileptic attacks. Chipault first saw the child when it was four years old; it was well developed and bright, but could hardly walk, and had speech disorders and convulsive attacks. A cranial depression was found corresponding to the Rolandic zone. Chipault performed resection of the cranium; beneath the dura a cicatricial area was found in the cortex. During the next six months there was but a single crisis; the patient then passed from observation.

Case VII.—D. F., aged nine years; was hit at age of one year on the vertex of the head by a piece of cornice. Fracture of skull diagnosed, but no surgical treatment. During the eight or nine months no bad results, but gradually periods of "absences" set in, followed by generalized epileptic crises. Spastic hemiplegia then developed on both sides. When Chipault saw the boy he was nine years old. Contractures were marked, but no muscular atrophy. Epileptic seizures at the rate of two or three per week. Chipault proposed an operation, but patient had not presented himself at the time of writing.

These ten cases reported show without doubt that this species of general epilepsy may be due to intra-uterine trauma, obstetrical trauma, and injuries of ordinary character. The injuries varied greatly in character; simple fracture, flattening, depression, perforation; finally, several cases presented no lesion whatever. If the lesion was seated outside the motor zone, the generalized convulsions constitute the dominant symptom. If within the motor area, the convulsions were still prominent, but the hemiplegic phenomena were more in evidence. Briefly put, extra-Rolandic trauma equals epileptic seizures; Rolandic trauma equals the same number of seizures but of a spasmodic hemiplegic form.

CLARK.

INTESTINAL NEUROSES. J. W. Rothwell (Medicine, March 1900).

The author proposes the following classifications:

(1) Peristaltic restlessness dependent upon increased irritability of the motor nerves of the small intestine, and causing gurgling,